

Material Safety Data Sheet

LIQUISEAL –PART B

MSDS No. 302085

Date of Preparation: 09/01/2008

Revision: 017

Section 1 - Chemical Product and Company Identification

Product/Chemical Name: LIQUISEAL-PART B

Chemical Formula: Mixture

General Use: Curative for Liqueiseal Part A

Manufacturer: Carlisle SynTec Incorporated, 1285 Ritner Highway, Carlisle, PA 17013, Phone: 800-479-6832

Emergency Phone Number: CHEMTREC (USA) 800-424-9300

Section 2 - Hazards Identification

☆☆☆☆☆ Emergency Overview ☆☆☆☆☆

Warning – Causes skin irritation

Warning – Causes serious eye irritation

Danger – May cause allergy or asthma symptoms or breathing difficulties, if inhaled

Warning – Suspected of causing genetic defects

Warning – May cause damage to (tissue injury in the) upper respiratory tract and lungs through prolonged or repeated inhalation.

Potential Health Effects

Primary Entry Routes: Skin contact, skin absorption, eye contact, inhalation, ingestion.

Target Organs:

Acute Effects

HMIS

H 2

F 0

R 0

PPE[†]

[†]Sec. 8

Inhalation: Excessive exposure may cause irritation to upper respiratory tract and lungs and pulmonary edema (fluid in the lungs). May cause allergic respiratory response. MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized. Symptoms may include coughing, difficulty breathing and a feeling of tightness in the chest. Effects may be delayed.

Eye: May cause eye irritation. May cause slight temporary corneal injury.

Skin: Prolonged contact may cause moderate skin irritation with local redness. Material may stick to skin causing skin irritation upon removal. Skin contact may cause an allergic skin reaction. Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

Ingestion: Ingestion can cause gastrointestinal irritation.

Carcinogenicity: IARC, NTP, and OSHA do not list this product as a carcinogen.

Medical Conditions Aggravated by Long-Term Exposure:

Chronic Effects: Breathlessness, chest discomfort, reduced pulmonary function, skin rash. The manifestations of respiratory symptoms may be delayed. Allergic skin sensitization may occur in some individuals. Decreased ventilatory capacity is possible.

Section 3 - Composition / Information on Ingredients

Hazardous Ingredients	CAS Number	% wt
Diphenylmethane 4,4'-Diisocyanate (MDI)	101-68-8 & 026447-40-5	30-60
Diphenylmethane 4,4'-Diisocyanate (Homo-polymer)	039310-05-9	10-30
Terphenyls	26140-60-3	0.1-1
Additional Ingredients	CAS Number	% wt
Hydrogenated Terphenyls	61788-32-7	

Section 4 - First Aid Measures

Inhalation: Remove to fresh air; give oxygen; call physician.

Eye Contact: Flush with water for at least 15 minutes; remove contact lenses, if present, after first five minutes. Obtain medical attention.

Skin Contact: Wash with soap and water, rubbing alcohol is helpful. If rash develops, consult physician and avoid re-exposure to product.

Ingestion: Do not induce vomiting; call physician immediately.

Note to Physicians: The manifestations of respiratory symptoms resulting from acute exposure may be delayed. May cause respiratory sensitization or asthma like symptoms. Bronchodilators, expectorants and antitussives may help. Excessive exposure may aggravate pre-existing asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

Section 5 - Fire-Fighting Measures

Flash Point: 350°F (>177°C)

Flash Point Method: COC

Autoignition Temperature: Not determined.

LEL: Not determined

UEL: Not determined

Flammability Classification: Not flammable.

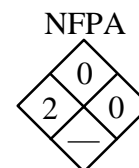
Extinguishing Media: In case of fire, use dry chemical, carbon dioxide, or foam. Water may not be effective as an extinguishing agent. Water fog or spray may be used to provide smothering effect on fire and to cool fire-exposed containers and surrounding combustibles. Do not use a solid stream of water because it can scatter and spread the fire. NOTE: Water may react vigorously with hot product.

Unusual Fire or Explosion Hazards: In case of fire, evacuate all down-wind personnel. If product becomes contaminated, do not reseal containers as pressure build-up may rupture them.

Hazardous Combustion Products: Isocyanate vapor, carbon dioxide, carbon monoxide, nitrogen oxides, traces of hydrogen cyanide.

Fire-Fighting Instructions: Fire fighters should wear self-contained breathing apparatus and full protective clothing. Do not breath smoke or vapors given off by burning material.

Fire-Fighting Equipment: Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.



Section 6 - Accidental Release Measures

Spill /Leak Procedures: Evacuate and ventilate area. Blanket with protein foam to control vapors. Soak up spillage with absorbent material. Transfer to open top containers in well ventilated area, and neutralize with a 10% mixture of Ammonium Hydroxide in water for 48 hours, allowing CO₂ to escape.

Large Spills:

Containment: For large spills, dike far ahead of liquid spill for later disposal. Do not release into sewers or waterways.

Cleanup: Dispose of in accordance with all local, state and federal regulations.

Regulatory Requirements: Follow applicable OSHA regulations (29 CFR 1910.120).

Section 7 - Handling and Storage

Handling Precautions: Avoid skin and eye contact. Avoid breathing vapors or mist. Use with adequate ventilation.

Storage Requirements: Store above 40°F (5°C). Avoid mixture contamination. Keep container closed when not in use. KEEP OUT OF REACH OF CHILDREN.

Section 8 - Exposure Controls / Personal Protection

Hazardous Ingredients:

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
Diphenylmethane 4,4'-Diisocyanate (MDI)	None estab.	None estab.	0.005 ppm / 0.051 mg/m ³	None estab.	0.005 ppm 0.05 mg/m ³	None estab.	75 mg/m ³ (in ppm)
Diphenylmethane 4,4'-Diisocyanate (Homo-polymer)	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.
Terphenyls	None estab.	None estab.	None estab.	None estab.	None estab.	None estab.	500 mg/m ³

Engineering Controls: Do not use in enclosed areas without proper ventilation. General and local exhaust ventilation must be sufficient to control airborne levels below the exposure guideline of 0.02 ppm.

Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs. Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

Administrative Controls:

Respiratory Protection: A NIOSH approved respirator if working in tightly enclosed area.

Protective Clothing/Equipment: Permeation resistant gloves (that meet ANSI/ISEA 105-2005) recommended. Rubber boots or industrial shoes to protect feet from contact with product. Freshly laundered clothing with long sleeves and long pants. Protective skin creams or emollients useful.

Safety Stations: Make emergency eyewash stations, safety/quick-drench showers, and washing facilities available in work area.

Contaminated Equipment: Separate contaminated work clothes from street clothes. Launder before reuse. Remove this material from your shoes and clean personal protective equipment.

Comments: Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet, or applying cosmetics.

Section 9 - Physical and Chemical Properties

Physical State: Liquid.

Appearance and Odor: Yellow oil liquid, very mild odor.

Odor Threshold: Not available.

Vapor Pressure: 0.001 mm Hg at 40°C

Vapor Density (Air=1): Heavier than air.

Specific Gravity (H₂O=1, at 4 °C): 1.09-1.14

pH: N/A

Water Solubility: Reacts with water.

Boiling Point(°C): 340 @ 1 atm

Freezing/Melting Point(°C): >0 (>32°F)

% Volatile: less than 1

Evaporation Rate(nBuAc=1): N/A

VOC: Less than 10 gpl

Flash Point: 350°F (>177°C)

Flash Point Method: COC

Autoignition Temperature: Not determined.

LEL: Not determined

UEL: Not determined

Section 10 - Stability and Reactivity

Stability: Stable.

Possibility of Hazardous Reactions: May occur.

Chemical Incompatibilities: Water, alcohols, acids, bases, metal compounds, or surface active materials.

Conditions to Avoid: Contact with water, alcohols, amines, or other materials which react with diisocyanates. Prolonged heating above 160°C (320°F), or storage below 5°C (41°F). Temperatures above 49°C (120°F) will accelerate reaction with water.

Hazardous Decomposition Products: Isocyanate vapor, carbon dioxide, carbon monoxide, nitrogen oxides, traces of hydrogen cyanide.

Section 11- Toxicological Information

Eye Effects: Irritating

Skin Effects: Irritating / Sensitizing

Toxicity Data:

Acute Inhalation Effects: Product toxicity has not been determined.

Acute Oral Effects: Product toxicity has not been determined.

Chronic Effects: Allergic skin sensitization may occur in some individuals. Decreased ventilatory capacity is possible.

Carcinogenicity: No evidence

Mutagenicity: MDI has shown positive in some invitro tests.

Teratogenicity: No evidence

Section 12 - Ecological Information

Ecotoxicity: Not known

Environmental Fate: Not known

Environmental Degradation: Not known

Soil Absorption/Mobility: Not known

Section 13 - Disposal Considerations

Disposal: Neutralize as described in Section 6 and dispose of in accordance with all local, state and federal regulations.

Section 14 - Transport Information

DOT Transportation Data (49 CFR 172.101):

Shipping Name: Not regulated Shipping Symbols: None Hazard Class: None ID No.: None Packing Group: None Label: None Special Provisions (172.102): n/a	Packaging Authorizations a) Exceptions: n/a b) Non-bulk Packaging: n/a c) Bulk Packaging: n/a	Quantity Limitations a) Passenger, Aircraft, or Railcar: n/a b) Cargo Aircraft Only: n/a Vessel Stowage Requirements a) Vessel Stowage: n/a b) Other: n/a
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Section 15 - Regulatory Information

EPA Regulations:

RCRA Hazardous Waste Number (40 CFR 261.33): Not listed

RCRA Hazardous Waste Classification (40 CFR 261): Not classified

TSCA (Toxic Substances Control Act) Status:

TSCA (United States) – The intentional ingredients of this product are listed.

CERCLA Hazardous Substance RQ – 40 CFR 302.4 (a)

Component	RQ (lbs)
Diphenylmethane 4,4'-Diisocyanate (MDI)	5000

SARA 311/312 Codes:

Immediate (X) Delayed (X) Fire () Reactive () Sudden Release of Pressure ()

SARA 313 Components (40 CFR 372.65):

Section 313 Component(s)	CAS Number	%
Diphenylmethane 4,4'-Diisocyanate (MDI)	101-68-8	30 – 60

SARA EHS (Extremely Hazardous Substance) (40 CFR 355): Not listed, Threshold Planning Quantity (TPQ)

OSHA Regulations:

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29 CFR 1910): None listed

EPA Accidental Release Prevention (40 CFR 68): None listed

State Regulations:

California Proposition 65:

The following statement is made in order to comply with the California Safe Drinking Water and Toxic Enforcement Act of 1986: This product contains the following substance(s) known to the State of California to cause reproductive harm:
 None

Delaware Air Quality Management List:

Chemical Name	DRQ:	State?
Diphenylmethane 4,4'-Diisocyanate (MDI)	5000	Must be reported to the DRQ

Massachusetts Hazardous Substances List:

Chemical Name	CAS #	Codes
Diphenylmethane 4,4'-Diisocyanate (MDI)	101-68-8	2, 4, F8, F9
Terphenyls	26140-60-3	2, 4
Hydrogenated Terphenyls	61788-32-7	4

Michigan Critical Materials Registry: None Listed

Minnesota Hazardous Substance:

Chemical Name	Codes	Hazards	Carcinogen?
Diphenylmethane 4,4'-Diisocyanate (MDI)	ANO	---	No
Terphenyls	A	--	No
Hydrogenated Terphenyls	A	--	No

New Jersey RTK Label Information: None Listed

New York List of Hazardous Substances:

Chemical Name	RQ – Air	RQ – Land	Note
Diphenylmethane 4,4'-Diisocyanate (MDI)	1	1	none

Pennsylvania RTK Label Information

Chemical Name	CAS #	Code
Diphenylmethane 4,4'-Diisocyanate (MDI)	101-68-8	E
Terphenyls	26140-60-3	--
Hydrogenated Terphenyls	61788-32-7	--

Washington Air Contaminant:

TWA (ppm):	0.5 (Hydrogenated Terphenyls)
TWA (mg):	5 (Hydrogenated Terphenyls)
STEL (ppm):	None listed
STEL (mg):	None listed
Ceiling (ppm):	0.02 (Diphenylmethane 4,4'-Diisocyanate - MDI) 0.5 (Terphenyls)
Ceiling (mg):	0.2 (Diphenylmethane 4,4'-Diisocyanate - MDI) 5 (Terphenyls)
Skin:	None listed

Section 16 - Other Information

Prepared By: Research & Development

Revision Notes: General Review - Formatting Changes

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